

Application No. 09/885568
Page 2

Amendment
Attorney Docket No. S63.2B-9515-US01

Amendments To The Claims:

Please cancel claim 4.

1. (Currently Amended) A balloon for a medical device comprising:
a ~~block-copolymer~~ polymer matrix material; and
a plurality of fibers distributed in the matrix material to provide reinforcement thereof,
the fibers being distributed in a selected direction relative to the balloon axis and composed of
material which has a greater tensile strength than the matrix material, the fibers selected from the
group consisting of polyetherketone, polyphenylene sulfide, aromatic nylon, polyurethane,
polyester, copolyester, polyester blends, polyester/polyurethane blends and fluoropolymer and
wherein the fibers are stronger than the matrix material and have a bulk elongation between 50%
and 200%.
2. (Original) A balloon as in claim 1 wherein the fibers are distributed in the matrix material
helically relative to the balloon axis.
3. (Original) A balloon as in claim 2 wherein said fibers are cores of polymeric material
coextruded with the matrix polymer material.
4. (Cancel)
5. (Original) A balloon as in claim 2 wherein the core polymeric material has a bulk elongation
less than the matrix material when oriented in the direction of the longitudinal axis.
6. (Original) A balloon as in claim 1, the balloon having a wall composed of a plurality of
laminate layers, at least one layer of which comprises said polymer matrix material and said
fibers.
7. (Original) A balloon as in claim 6 wherein said laminate layers comprise an alternating series
of fiber-containing and fiber-free layers.
8. (Original) A balloon as in claim 7 having at least 7 of said laminate layers.
9. (Original) A balloon as in claim 6 wherein the fibers are distributed in the matrix material
helically relative to the balloon axis.
10. (Original) A balloon as in claim 9 wherein said fibers are cores of polymeric material
coextruded with the matrix polymer material.
11. (Original) A balloon as in claim 9 wherein said fibers are LCP fibers having a diameter of

Application No. 09/885568
Page 3

Amendment
Attorney Docket No. S63.2B-9515-US01

from 0.01 to about 10 microns.

12. (Original) A balloon as in claim 6 having a body portion wherein the fibers are oriented substantially parallel to the longitudinal axis of the balloon.

13. (Original) A balloon as in claim 12 wherein the fibers are LCP fibers having a diameter of from 0.01 to about 10 microns.

14. (Currently Amended) A balloon for a medical device comprising from 7 to 50 total polymer layers alternating between layers (A) and (B), layer (A) composed of a ~~block copolymer matrix~~ polymer material and layer (B) composed of a ~~block copolymer matrix~~ polymer material and LCP a plurality of fibers distributed in the matrix material to provide reinforcement thereof, the fibers being distributed in a selected direction relative to the balloon axis and composed of material which has a greater tensile strength than the matrix material, the fibers selected from the group consisting of polyetherketone, polyphenylene sulfide, aromatic nylon, polyurethane, polyester, copolyester, polyester blends, polyester/polyurethane blends and fluoropolymer and wherein the fibers are stronger than the matrix material and have a bulk elongation between 50% and 200%.

15. (Canceled)

16. (Currently Amended) A balloon as in claim 14 wherein the block copolymer material of layer (A) and the block copolymer matrix polymer material of layer (B) are the same.

17. (Canceled)

18. (Previously Presented) A balloon as in claim 14 wherein the ratio A/B of the total thickness of the two types of layers, (A) and (B) respectively, is from about 5 to about 15.

19. (Original) A balloon as in claim 18 wherein said ratio is from 8 to 10.

20. (Previously Presented) A balloon as in claim 14 wherein in the layers (B) the LCP polymer is present in the blend in an amount of from about 5 to about 25 % by weight.

21. (Original) A balloon as in claim 14, wherein the balloon has a longitudinal axis, at least some of said laminate layers are formed from an extruded blend of a matrix polymer material and an LCP polymer material, and the LCP polymer forming fibers within the matrix polymer with the fibers oriented substantially in a longitudinal or helical direction relative to the balloon axis.

22-23. (Canceled)

24. (Previously Presented) The balloon of claim 14 wherein said block copolymer of layer (A) is

Application No. 09/885568
Page 4

Amendment
Attorney Docket No. S63.2B-9515-US01

compliant or semi-compliant and said block copolymer of layer (B) is compliant or semi-compliant.

25. (Previously Presented) The balloon of claim 14 wherein said block copolymer of layer (A) and said block copolymer of layer (B) are selected from the group consisting of block copolymers comprising polyamide blocks and polyether blocks, block copolymers comprising polyester blocks and polyether blocks, and mixtures thereof.